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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,077	09/19/2006	Sjoerd Stallinga	NL 040300	3824

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EXAMINER

LEE, NICHOLAS J

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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04/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,077	Applicant(s) STALLINGA ET AL.	
	Examiner NICHOLAS LEE	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 5-6, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,016,301 to Takasawa et al ("Takasawa").

As to claim 1, Takasawa discloses an optical element for an optical scanning device for reading and/ or writing an optical record carrier of any one of at least first, second, and third formats. The optical element comprising at least two objective lenses wherein the first objective lens is arranged and configured to provide substantially optimal compensation for spherical aberration during reading and/ or writing of said second format (Fig. 1, 5a; col. 7, lines 36-40) and a second objective lens being arranged and configured to provide substantially optimal compensation for spherical aberration during reading and/ or writing of third format (Fig. 1, 5b; col. 7, lines 41-44).

As to claim 2, Takasawa discloses an optical element comprising two separate objective lenses (Fig. 12, 5a, 5b).

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As to claim 5, Takasawa further discloses an optical element comprising objective lenses wherein each objective is provided with a diffractive (Fig. 12, 41; col. 11, lines 5-20) and refractive element (Fig. 12, 44; col. 11, lines 32-37).

As to claim 6, see the rejection of claim 5 above. Takasawa further discloses an optical element comprising objective lenses wherein each objective lens is provided a diffraction grating (Fig. 12, 41; col. 11, lines 5-20).

As to claim 9, the same rejection or discussion is used as in the rejection of claim 9.

As to claim 11, Takasawa further discloses an actuator (Fig. 7, 20) for moving said optical element relative to said optical record carrier so as to maintain said electromagnetic beam (col. 14, lines 61-63) focused on said data record layer (col. 8, lines 7-14).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,016,301 to Takasawa et al ("Takasawa").

As to claim 3, see the discussion of Takasawa above. Takasawa fails to disclose an optical element wherein the objective lenses are provided in a monolithic, multi-lens component. However, Applicant discloses (Fig. 2) that it is known in the prior wherein two objective lenses are formed in a monolithic dual lens element (¶ 0022). It would have been obvious to have combined the two lenses disclosed by Takasawa as a monolithic dual lens element.

5. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,016,301 to Takasawa et al ("Takasawa"), in view of US Patent No. 5,526,340 to Tanaka ("Tanaka").

As to claim 4 and 10, see the discussion in the rejection of claim 3 above. Takasawa fails to disclose a means of manufacturing a monolithic component by a plastic injection molding technique.

Tanaka discloses an optical apparatus comprising an objective lens (Fig. 1, 16) wherein the objective lens is made by plastic injection molding (col. 5, lines 15-17).

At the time of the invention it would have been obvious to one of ordinary skill in the art to have modified Takasawa with the teachings of Tanaka to have formed the objective lenses by plastic injection molding technique.

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6. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,016,301 to Takasawa et al ("Takasawa"), in view of US Patent No. 5,243,585 to Hoshino et al ("Hoshino").

As to claim 7, see the discussion of Takasawa above. Takasawa fails to disclose an optical element wherein a diffraction grating is a blazed grating, wherein the height of each blaze is selected such that for the various formats high efficiency is achieved at a single diffraction order.

Hoshino discloses an optical head comprising a diffraction means of only first order light beams further comprises blazed grating elements wherein each element has a height h (claim 21).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified Takasawa with the teachings of Hoshino to maximize the diffraction efficiency and thereby allowing a light beam reflected by an optical disk to be guided to a detector with maximum efficiency (col. 16, lines 54-61).

As to claim 8, Hoshino further discloses a blazed grating element having a height h and a wavelength of light being λ such that:

$$h = \lambda / (n - 1)$$

where n represents the refractive index (claim 21).

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7. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,016,301 to Takasawa et al ("Takasawa"), in view of US Patent No. 2004/0191463 to Nee ("Nee").

As to claim 12, see the discussion of Takasawa above. Takasawa fails to disclose an optical scanning device wherein said multi layer format comprises Blu-ray Disc or Portable Blue.

Nee discloses a multi-layer format (Fig. 10) wherein the format is of the Blu-ray configuration further comprising two write once layers (Fig. 11, 1048, 1024).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified Takasawa with the teachings of to have created a multi-layer format comprising a recording layer of a Blu-ray format.

As to claim 13, the same rejection or discussion is used as in the rejection of claims 12. Takasawa further discloses a first format (2a) and a second format (2b) wherein the formats may comprise a DVD and CD respectively (col. 7, lines 28-35).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS LEE whose telephone number is (571)270-7354. The examiner can normally be reached on Monday-Friday 7:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NICHOLAS LEE/
Examiner, Art Unit 2627

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit 2627